

CLAIMS

What is claimed is:

1. A method for producing a cream cheese product having significantly reduced levels of casein, said method comprising:
 - 5 (i) preparing an aqueous suspension having a protein concentration of about 5 to about 20 percent from water and a whey protein concentrate; adjusting the pH of the aqueous suspension, if necessary, to a pH of about 7 to about 9; and heating the aqueous suspension in a single heat treatment step to a
10 temperature of about 70 to about 95°C for a time sufficient to obtain a polymerized whey protein having about 30 to about 85 percent disulfide crosslinking; and optionally cooling the aqueous suspension containing the polymerized whey protein; and
 - 15 (ii) mixing at least a portion of the aqueous suspension containing the polymerized whey protein from (i), water, and milkfat to obtain a mixture;
 - (iii) heating the mixture to a temperature of about 55 to about 75°C to liquify the milkfat;
 - (iv) homogenizing the mixture from (iii) at about 1,500 psi to about
20 5,000 psi to form a homogenized mixture;
 - (v) optionally pasteurizing the homogenized mixture;
 - (vi) cooling the homogenized or optionally pasteurized mixture to approximately ambient temperature;
 - (vii) inoculating the mixture with a lactic culture and fermenting the
25 inoculated mixture to obtain a fermented mixture;
 - (viii) mixing a stabilizer and optionally a salt with the fermented mixture and cooking at a temperature of about 70 to about 105°C to obtain a cooked material; and
 - (ix) homogenizing the cooked material to obtain the cream cheese
30 product having significantly reduced levels of casein.

2. The method according to claim 1, wherein cream cheese product has essentially no casein.

3. The method according to claim 2, wherein the protein concentration of the aqueous suspension is about 5 to about 6 percent.

5 4. The method according to claim 3, wherein the pH of the aqueous suspension is about 7.2 to about 8.0.

5. The method according to claim 4, wherein mixture in step (iv) is homogenized at about 3,000 psi to about 5,000 psi.

10 6. The method according to claim 5, wherein the aqueous suspension in step (i) is heated for about 10 minutes to about 60 minutes.

7. The method according to claim 2, wherein the stabilizer is selected from the group consisting of food grade hydrocolloids and texture modifiers.

15 8. The method according to claim 7, wherein the food grade hydrocolloids are gums, starches, or maltodextrins, and texture modifiers are emulsifiers.

9. The method according to claim 1, wherein the temperature in step (viii) is about 80 to 95°C.

10. The method according to claim 1, wherein the cooking in step (viii) is conducted for about 5 to 60 minutes.

20 11. The method according to claim 10, wherein the cooking in step (viii) is conducted for about 10 to about 30 minutes.

12. The method according to claim 1, wherein a salt is added in step (viii).

13. The method according to claim 12, wherein the salt is selected from the group consisting of sodium chloride and potassium chloride.

5 14. The method according to claim 1, wherein the homogenizing in step (ix) is conducted at a pressure of about 1,500 to about 5,000 psi.

15. The method according to claim 14, wherein the homogenizing in step (ix) is about 2500 to about 3000 psi.

10 16. The method according to claim 2, wherein the stabilizer is selected from the group consisting of food grade hydrocolloids and texture modifiers.

17. The method according to claim 16, wherein the food grade hydrocolloids are gums, starches, or maltodextrins, and texture modifiers are emulsifiers.

15 18. A cream cheese product having significantly reduced levels of casein, said cream cheese product being obtained by a method comprising:
 (i) preparing an aqueous suspension having a protein concentration of about 5 to about 20 percent from water and a whey protein concentrate;
 adjusting the pH of the aqueous suspension, if necessary, to a pH of about 7 to about 9; and
20 heating the aqueous suspension in a single heat treatment step to a temperature of about 70 to about 95°C for a time sufficient to obtain a polymerized whey protein having about 30 to about 85 percent disulfide crosslinking; and
 optionally cooling the aqueous suspension containing the polymerized
25 whey protein; and

(ii) mixing at least a portion of the aqueous suspension containing the polymerized whey protein from (i), water, and milkfat to obtain a mixture;

(iii) heating the mixture to a temperature of about 55 to about 75°C to liquify the milkfat;

5 (iv) homogenizing the mixture from (iii) at about 1,500 psi to about 5,000 psi to form a homogenized mixture;

(v) optionally pasteurizing the homogenized mixture;

(vi) cooling the homogenized or optionally pasteurized mixture to approximately ambient temperature;

10 (vii) inoculating the mixture with a lactic culture and fermenting the inoculated mixture to obtain a fermented mixture;

(viii) mixing a stabilizer and optionally a salt with the fermented mixture and cooking at a temperature of about 70 to about 105°C to obtain a cooked material; and

15 (ix) homogenizing the cooked material to obtain the cream cheese product having significantly reduced levels of casein.